

IMAGING POLARIMETER SENSOR WITH  
ACHROMATIC BEAM-SPLITTING POLARIZER

ABSTRACT OF THE DISCLOSURE

5 An imaging polarimeter sensor includes an achromatic beam-splitting  
polarizer that receives a polychromatic image beam of a scene and simultaneously  
produces a first polarized polychromatic image beam and a second polarized  
polychromatic image beam. The second polarized polychromatic image beam is  
of a different polarization than the first polarized polychromatic image beam and  
is angularly separated from the first polarized polychromatic image beam. The  
10 achromatic beam-splitting polarizer preferably includes a Wollaston prism  
through which the polychromatic image beam passes, and at least one grating  
through which the polychromatic image beam passes either before or after it  
passes through the Wollaston prism. An imaging detector receives the first  
polarized polychromatic image beam and the second polarized polychromatic  
15 image beam and produces an output image signal responsive to the first polarized  
polychromatic image beam and the second polarized polychromatic image beam.